

# Romain Bastiani

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Actively seeking a full-time position as a Quantitative Researcher starting April 2026.

## WORK EXPERIENCE

### Inception Technology

Quantitative Researcher – Macro and Systematic Commodities

Paris, France  
July 2025 – April 2026

Start-up providing quantitative tools to tier-1 global commodity trading houses (clients under NDA).

- Leveraged and enhanced the **macro factor lens** for commodity derivatives portfolios to provide traders with clear P&L attribution and risk views.
- Developed a **regime-switching Scenario Analysis engine** using **Gaussian Mixture Models (GMM)** validated through **Time-Series Cross-Validation** to capture non-linear factor dependencies and quantify portfolio tail risks.
- Keywords:** *Macro Factor Lens, Regime-Switching Models, Gaussian Mixture Models, Scenario Analysis.*

### Quantitative Researcher Intern

Jan 2025 – July 2025

- Researched and backtested high-capacity **factor models** and **Time Series Momentum strategies** (Moskowitz, Ooi and Pedersen (2012)) on commodity futures.
- Engineered a conversational AI platform (LibreChat) integrated with a custom Model Context Protocol (MCP) enabling structured queries on proprietary datasets using advanced LLMs.
- Keywords:** *Factor Models, Time Series Momentum, Backtesting, LLMs Integration.*

### Funds Avenue

Risk Management Intern

Luxembourg  
July 2024 – Dec 2024

- Assessed portfolio risk using **stress tests** and **Value-at-Risk (VaR)** via Python/Excel models and presented risk reports to senior management.
- Applied multi-factor risk frameworks aligned with **Axioma** and **Barra**-style models for factor exposure analysis and systematic variance decomposition.
- Keywords:** *Risk Management, Value-at-Risk (VaR), Stress Testing, Portfolio Analysis, Python, Axioma, Barra.*

## PERSONAL PROJECTS

### Guéant–Lehalle–Fernandez-Tapia (GLFT) Market Making Model | Python, NumPy, Pandas, Polars, SciPy

Sep 2025

- Implemented the closed-form optimal quoting strategy under inventory constraints from the **Guéant–Lehalle–Fernandez-Tapia** market making framework (extension of Avellaneda–Stoikov).
- Built a realistic backtest including Poisson fills, inventory dynamics, maker fees, latency and stochastic slippage.

### Portfolio Optimization Strategy | Python, NumPy, SciPy, Matplotlib

Jan 2024

- Constructed optimal portfolios using **Mean-Variance Optimization** via `scipy.optimize` to maximize the Sharpe Ratio.
- Simulated thousands of portfolios (Monte Carlo) to visualize the Efficient Frontier and the Capital Market Line (CML).

## EDUCATION

### Neoma Business School

MSc Corporate Finance & Investment Banking | GPA: 4.0/4.0

Rouen, France  
Oct 2023 – Dec 2024

- Double degree with ESIGELEC.
- Thesis: **Stochastic Models and Real Options in Corporate Valuation.**
- Key Modules:** Financial Engineering, Advanced Corporate Finance, Mergers & Acquisitions, Corporate Strategies.

### ESIGELEC Engineering School

Engineering Degree in Financial Engineering (after PTSI Preparatory Classes) | **Top 10% of Class**

Rouen, France  
Sep 2018 – Dec 2024

- Key Modules:** Advanced Probability, Machine Learning, Monte Carlo Simulation, Applied Statistics for Finance.

## ADDITIONAL TRAINING

### MIT – edX

Quantitative Finance & Machine Learning Certifications

Online

- Mathematical Methods for Quantitative Finance:** Probability, stochastic processes (discrete & continuous), Itô calculus, time series.
- Machine Learning with Python:** Linear models, clustering, recommender systems, CNN, generative models, reinforcement learning, NLP.

## SKILLS & INTERESTS

**Languages:** French (native), English (C1)

**Programming:** Python (NumPy, pandas, scipy, scikit-learn, Polars), SQL

**IT:** Microsoft Office,  $\LaTeX$

**Interests:** Fencing (Regional Level & Referee), French History